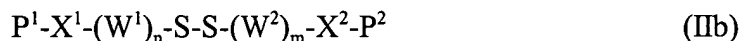


therefrom upon treatment with a suitable disulfide cleaving reagent, said method comprising:

- (a) contacting a solid support with an unsymmetrical disulfide linking group of formula:



wherein,

P^1 and P^2 are each members independently selected from the group consisting of a hydrogen atom, an activating group and a protecting group;

X^1 and X^2 are each independently selected from the group consisting of a bond, -O-, -NH-, -NR- and -CO₂-, wherein R is a lower alkyl group having one to four carbon atoms;

W^1 and W^2 are each independently selected from the group consisting of methylene, oxyethylene and oxypropylene; and

n and m are each independently integers of from 2 to 12 with the proviso that n and m are not the same when W^1 and W^2 are the same, to produce a derivatized solid support having attached unsymmetrical disulfide linking groups suitably protected with protecting groups;

- (b) optionally removing said protecting groups, if present, from said derivatized solid support to provide a derivatized solid support having unsymmetrical disulfide linking groups with synthesis initiation sites; and
- (c) coupling said small ligand molecules to said synthesis initiation sites on said derivatized solid support to produce a solid support having an array of diverse small ligand molecules which are removable therefrom upon application of said disulfide cleaving agent.

Amendments to the claims are indicated in the attached "Marked Up Version of Amendments" (pages iii - iv).

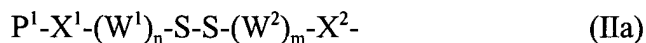
Please add new Claims 23-34.

23. (New) A method of synthesizing an array of diverse polymers on a substrate, comprising:

- (a) providing a modified substrate for use in solid phase chemical synthesis, said substrate having the formula:



wherein A is a solid support, B is a bond or a spacer group, and L is a linking group having the formula:



wherein:

P^1 is a protecting group;

X^1 and X^2 are each independently selected from the group consisting of a bond, -O-, -NH-, -NR- and -CO₂-, wherein R is a lower alkyl group having one to four carbon atoms;

W^1 and W^2 are each independently selected from the group consisting of methylene, oxyethylene and oxypropylene; and

n and m are each independently integers of from 2 to 12 with the proviso that n and m are not the same when W^1 and W^2 are the same; and

- (b) preparing an array of diverse polymers on said modified substrate.

24. (New) The method of Claim 23, wherein P^1 is a photolabile protecting group.

25. (New) The method of Claim 23, wherein P^1 is a photolabile protecting group, W^1 and W^2 are both methylene, and X^1 and X^2 are both -O-.

26. (New) The method of Claim 23, wherein P^1 is a photolabile protecting group, X^1 and X^2 are both -O-, and n and m are each integers of from 2 to 8.

27. (New) The method of Claim 26, wherein n is 2.

28. (New) The method of Claim 23, wherein P^1 is DMT, X^1 and X^2 are both -O-, W^1 and W^2 are both methylene, and n and m are each integers of from 2 to 8.
29. (New) The method of Claim 28, wherein n is 2.
30. (New) The method of Claim 23, wherein the polymers are peptides.
31. (New) The method of Claim 23, wherein the polymers are polynucleotides.
32. (New) The method of Claim 23, wherein the preparing an array comprises:
 - (i) optionally removing said protecting groups from said modified substrate to provide a modified support with synthesis initiation sites; and
 - (ii) coupling monomers to said synthesis initiation sites on said modified substrate to produce a modified substrate having an array of diverse polymers.
33. (New) The method of Claim 32, wherein the selected regions of the modified support are activated with light.
34. (New) The method of Claim 23, further comprising releasing the polymers from the modified support.

REMARKS

Information Disclosure Statement

An Information Disclosure Statement (IDS) is being filed concurrently herewith. Entry of the IDS is respectfully requested.